

## ABSTRACT

An apparatus for wavelength-shift multiplexing narrowband filters a composite photonic signal to provide a narrowband signal. The narrowband filtering operates as a channel selector by isolating the narrowband signal from the composite photonic signal. The narrowband signal may be a full-duplex signal with transmit and receive components. The narrowband signal may be wavelength shifted to provide a channelized photonic signal. The present invention is useful as a building block for photonic transmission, switching and multiplexing. Multiple channelized photonic signals may be combined or separated by the present invention.